

**Listing of the Claims:**

The following is a complete listing of all the claims in the application, with an indication of the status of each:

- 1        1 (Currently Amended). An FDM-CDMA transmission method comprising  
2        the steps of:  
3                assigning N (N is an integer of 1 or more) pieces of digital data to  
4        N frequency channels for modulation and transmission using the frequency  
5        division multiplex (FDM) method; and  
6                performing spread modulation on N pieces of digital data by the  
7        code division multiple access (CDMA) method before the modulation,  
8                wherein the spread modulation is performed only on the frequency  
9        channel adopting the FDM-CDMA method when FDM-method  
10       broadcasting and FDM-CDMA-method communication are used together  
11       for transmission.
- 1        2 (Original). An FDM-CDMA, transmission method as claimed in claim 1,  
2        further comprising the steps of:  
3                generating N vectors, as spreading codes, which are +1 or -1  
4        polarity and are unique to users; and  
5                multiplying the nth (n is an integer from 1 to N) digital data and the  
6        nth vector corresponding thereto. and wherein:  
7                the spread modulation is performed on the N pieces of digital data  
8        by executing each of the steps.
- 1        3 (Original). An FDM-CDMA transmission method as claimed in claim 1,  
2        wherein: the N frequency channels are divided into a plurality of groups,  
3        and independent digital data is assigned to each of the groups.
- 1        4 (Canceled).

1        5 (Currently Amended). An FDM-CDMA receiving method in which N (N  
2        is an integer of 1 or above) pieces of digital data are assigned to N  
3        frequency channels and are modulated and transmitted by the frequency  
4        division multiplex (FDM) method, the receiving method comprising the  
5        steps of: performing demodulation according to FDM method on the  
6        received signals, when signals are received in which spread modulation  
7        has been performed according to the code division multiple access  
8        (CDMA) method, on N pieces of digital data before the modulation; and  
9                performing inverse spread modulation according to the CDMA  
10        method on the N pieces of digital data after modulation;  
11                performing the inverse spread modulation on the frequency channel  
12        adopting the FDM-CDMA method when FDM-method broadcasting and  
13        the FDM-CDMA-method communication are used together for receiving.

1        6 (Original). An FDM-CDMA receiving method as claimed in Claim 5,  
2        further comprising the steps of:  
3                generating N vectors, as inverse spreading codes, which are +1 or  
4        -1 polarity and which are unique to users at a transmission side; and  
5        multiplying the nth (n is an integer of 1 to N) digital data before the  
6        demodulation and the nth vector corresponding thereto, and wherein:  
7        the inverse spread modulation is performed on the N pieces of digital data  
8        after the demodulation by executing each of the steps.

1        7 (Original). An FDM-CDMA, receiving method as claimed in claim 5,  
2        further comprising the step of:  
3                selecting and adding, for each group, only frequency channels  
4        belonging to the same group after the inverse spread modulation. when  
5        signals are received in which the N frequency channels are divided into a  
6        plurality of groups and independent digital data are assigned to each of the  
7        groups.

1        8 (Canceled).

1        9 (Currently Amended). An FDM-CDMA transmitting device, comprising:  
2                a frequency division multiplex (FDM) circuit for assigning N (N is  
3        an integer of 1 or above) pieces of digital data to N frequency channels for  
4        modulation according to the FDM method;  
5                a spreading code setting circuit for generating N spreading codes  
6        unique to users; and  
7                a multiplier for multiplying the nth (n is an integer from 1 to N)  
8        before the modulation and the nth spreading code corresponding thereto  
9        for outputting the digital data after the multiplication to an FDM  
10       combining circuit, wherein  
11               the spreading code setting circuit only generates the spreading  
12       codes corresponding to the frequency channels used in the FDM-CDMA  
13       method when FDM- method broadcasting and the FDM-CDMA-method  
14       communication are used together for transmission.

1        10 (Original). An FDM-CDMA transmitting device as claimed in claim 9,  
2        wherein: the spreading code setting circuit generates N vectors, as  
3        spreading codes, which are either +1 or --1 polarity.

1        11 (Original). An FDM-CDMA transmitting device as claimed in claim 9,  
2        further comprising:  
3                a signal dividing circuit for dividing the N frequency channels into  
4        a plurality of groups and for assigning independent digital data to each of  
5        the groups.

1        12 (Canceled).

1        13 (Currently Amended). An FDM-CDMA receiving device, in which N  
2        (N is an integer of 1 or above) pieces of digital data are assigned to N  
3        frequency channels and are modulated and transmitted according to the

3 frequency channels and are modulated and transmitted according to the  
4 frequency division multiplex (FDM) method, the receiving device  
5 comprising:

6 a frequency division multiplex (FDM) separating circuit for  
7 receiving signals on which spread modulation according to the code  
8 division multiple access (CDMA) method has been performed on N pieces  
9 of digital data before the modulation, then performing demodulation  
10 according to the FDM method on the received signals, and outputting N  
11 pieces of digital data after the demodulation;

12 an inverse spreading code setting circuit for generating N inverse  
13 spreading codes inherent to users at a transmission side; and

14 a multiplier for multiplying the nth (n is an integer from 1 to N)  
15 digital data after the demodulation and the nth inverse spreading code  
16 corresponding thereto, wherein:

17 the inverse spreading code setting circuit only generates the inverse  
18 spreading codes corresponding to the frequency channels used in the  
19 FDM-CDMA-method when FDM- method broadcasting and FDM-  
20 CDMA-method communication are used together for reception.

1 14 (Original). An FDM-CDMA receiving device as claimed in claim 13,  
2 wherein:

3 the inverse spreading code setting circuit generates N vectors, as  
4 inverse spreading codes, which are +1 or -1 polarity and are unique to  
5 users at the transmission side,

1 15 (Original). An FDM-CDMA receiving device as claimed in claim 13,  
2 further comprising:

3 a selecting/adding circuit for selecting and adding, for each group,  
4 only frequency channels belonging to the same group after the inverse  
5 spread modulation, when signals are received in which the N frequency  
6 channels are divided into a plurality of groups and independent digital data

Docket WN-2355  
Serial No.: 09/851,975

7

7 is assigned to each of the groups.

16 (Canceled).